SOV/137-57-11-22251

Translation from: Referativnyy zhurnal, Metallurgiya, 1957, Nr 11, p 226 (USSR)

AUTHORS: Tovpenets, Ye.S., Sin'kovskaya, G.N.

TITLE: Steel Analysis by Dilatometry and X-Ray Diffraction Study (Dilatometricheskiy i rentgenostrukturnyy analizy staley)

PERIODICAL: Tr. Donetsk. industr. in-ta, 1957, Vol 19, pp 59-64

ABSTRACT: Dilatometry and X-ray diffraction analysis were used to investigate the effects of chemical composition, conditions of cooling, and the homogeneity of steel upon the decomposition of supercooled austenite (DSA) in alloyed structural steels of the following % composition: C 0.32 - 0.42, Mn 0.40 - 0.72, Si 0.25 - 0.38, P 0.035, S 0.030 - 0.040, Cr 0.70 - 2.44, NiO 3.82, Mo 0 - 0.43, V 0 - 0.17. The higher the degree of alloying of the steel, the lower the temperatures of onset and termination of DSA. As the homogeneity of the steel declines, the temperature of termination of DSA declines toward a lower temperature region. A fluctuating cooling regimen shifts the end of DSA in the region toward higher temperatures. The temperature of reheating in a fluctuating cooling procedure must be the higher, the higher the alloying of the steel. The

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Steel Analysis by Dilatometry and X-Ray Diffraction Study

temperature of supercooling must be lower than the temperature of onset of DSA, but higher (by 20-25°C) than the temperature of onset of the martensite transformation. A fluctuating cooling regimen makes for the most complete DSA in the region of the pearlitic transformation.

N.K.

TOVPENTSEV, YU.K.

S/137/61/000/010/020/056
A006/A101

AUTHORS: Goryunova, N.A., Averkiyeva, G.K., Sharavskiy, P.V., Tovpentsev, Yu.K.

TITLE: Investigation of quaternary alloys based on indium antimonide and cadmium telluride

PERIODICAL: Referativnyy zhurnal. Metallurgiya, no. 10, 1961, 44, abstract 100344 (V sb. "Fizika i khimiya", Leningrad, 1961, 22 - 25)

TEXT: The authors present brief information on investigating a pseudo-binary section CdTe-InSb of the quaternary Cd-Te-In-Sb system. The alloys investigated were prepared by direct fusion of the initial materials in evacuated quartz ampoules and were subjected to metallographical analysis. Simultaneously microhardness was determined. It was established that in the range of 95 - 100% InSb concentration there is a homogeneous area with ZnS structure. In the other points of the system two phases were revealed whose microhardness exceeds that of the initial components - CdTe and InSb.

A. Nashel'skiy

[Abstracter's note: Complete translation]

Card 1/1

On the dissociation of Hg in HgTe. V. A. Khabarova, P. V. Sharavskiy.

On the nature of solid solutions of CdTe in InSb. E. N. Khabarov, P. V. Sharavskiy.

Preparation and electrical properties of solid solutions of the system HgTe-CdTe. Yu. K. Tovpentsev, P. N. Sharavskiy.

Some physical properties of HgTe. L. A. Osnach, P. V. Sharavskiy. (Presented by P. V. Sharavskiy--25 minutes).

Report presented at the 3rd National Conference on Semiconductor Compounds, Kishinev, 16-21 Sept 1963

KAPIAN, M.I., GOL'DSHTEYN, B.Z., TOVPIK, E.S.

Automatic machine for making cylindrical springs. Stan.i instr. 31 no.4:36-37 Ap '60. (MIRA 13:6)
(Machine tools)

ACCESSION NR: AP4018073 S/0119/64/000/002/0012/0013

AUTHOR: Balashova, N. N.; Smagunova, N. A.; Tovpinets, Ye. I.

TITLE: Reducing porosity of nickel coating

SOURCE: Priborostroyeniye, no. 2, 1964, 12-13

TOPIC TAGS: nickel plating, nickel coating, nickel coating porosity, nickel electroplating, electroplating

ABSTRACT: An experimental investigation of the effect of additives to (a) nickel electrolytes or (b) cleaning liquors upon the porosity of nickel coating is described. Cation-active, anion-active, and nonionogen additives were tested; each test was conducted with power on and power off, and the results were evaluated by a microscopic count of visible pores per 1 cm^2. These results with additions to the electrolyte are reported:

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Additive:	Pore Count: Power On	Power Off 10-15 sec
None	500	500
Sodium lauryl sulfate	500	120
French tipol	500	130

And with additions to cleaning liquors:

Class:	Additive:	Pore Count: Power On	Power Off
	None	500	500
Cation	Alkamon D	90	330
Anion	Sodium lauryl sulfate	500	390
Nonionogen	OP-7	28	23

Card 2/3

ACCESSION NR: AP4018073
APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001756420010-5"

It is recommended that the parts to be nickel-plated be washed in a water bath to which 1-1.5 g/lit of OP-7 or OP-10 has been added. Orig. art. has: 2 figures and 2 tables.

ASSOCIATION: NIIChasprom (Scientific Research Institute of Clock Industry)

SUBMITTED: 00 DATE ACQ: 18Mar64 ENCL: 00

SUB CODE: ML NO REF SOV: 004 OTHER: 004

Card 3/3

KEKALO, I.B.; LIVSHITS, B.G.; Prinimala uchastiya: TOVPYGA, O., studentka

Negative △ G-effect and the magnetic internal friction in nickel depending on heat treatment. Fiz. met. i metalloved. 14 no.2:223-230 Ag '62. (MIRA 15:12)

1. Moskovskiy institut stali i splavov.
(Nickel—Heat treatment) (Internal friction)

SAL'NIKOV, L.; TOVSHTEYN, K.

Lowering operation costs at grain receiving stations and flour and feed mills of Odessa Province. Muk-elev.prom. 25 no.1:11 Ja '59.
(MIRA 12:3)

1. Odesskoye oblastnoye upravleniye khleboproduktov.
(Odessa Province--Grain trade)

TOVSHTEYN, Konstantin Matveyevich; PLATONOV, A.N., kand. ekon. nauk, red.; VOLKOV, P.N., red.; GOLUBKOVA, L.A., tekhn. red.

[Analysis of the managerial operations of grain-receiving enterprises] Analiz khoziaistvennoi deiatel'nosti khlebopriemnykh predpriiatii. Pod red. A.N.Platonova. Moskva, TsINTI, 1963. 69 p. (MIRA 16:12)
(Odessa Province--Grain elevators--Accounting)

[illegible] [illegible]

USSR/Mineral Industries
Mines and Mining

"Rapid Preparations of Cuts for Clearing Excavations," I. A. [illegible], [illegible] [illegible]-skiy I. P. Bondarenko, 3 pp

"Gornyy Zhurnal" No 8

Description of work done by I. A. [illegible](a crew in exploiting [illegible] of shaft imeni Kirov. Tabular record of fulfillment of norms for 1947 on an average of [illegible] percent.

PA 17T74

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001756420010-5"

TOVSTANOVSKIY, Dmitriy Pavlovich; SHOSTAK, Afanasiy Grigor'yevich; NESTEROV, Petr Grigor'yevich; DUDKO, Viktor Dmitriyevich; AFONINA, G.P., red.izd-va; SHAFETA, S.M., tekhn. red.

[Technical and economic ore mining handbook] Tekhniko-ekonomicheskii gorno-rudnyi spravochnik. Kiev, Gostekhizdat USSR, 1963. 316 p. (MIRA 17:3)

TOVSTANOVSKIY, Dmitriy Pavlovich; NESTEROV, Petr Grigor'yevich; VOVK, Aleksey Anufriyevich; FILIPPENKO, I.T., inzh., retsenzent; AFONINA, G.P., red.izd-va; SHAFETA, S.M., tekhn. red.

[Labor productivity in Ukrainian mining enterprises]Proizvoditel'nost' truda na gornorudnykh predpriiatiiakh Ukrainy. Kiev, Gostekhizdat, USSR, 1963. 255 p. (MIRA 16:3)
(Ukraine--Mining engineering--Labor productivity)

KARMAZIN, V.I., doktor tekhn. nauk; MALETSKIY, N.A.; TOVSTANOVSKIY, O.D.

Improvement in the magnetizing roasting of Kerch peninsula ores in tubular rotary furnaces. Met. i gornorud. prom. no.4:64-66 Jl-Ag '64. (MIRA 18:7)

BUSHUYEV, V.P.; GUBIN, G.V.; GONCHARENKO, Yu.I.; KARMAZIN, V.I.; MARGULIS, V.S.; MITROV, V.A.; NIKOLAYENKO, N.O.; BOBRUSHKIN, L.G.; BUROV, A.I.; RYBAKOV, V.N.; SOSHIN, A.F.; TATSIYENKO, P.A.; TOVSTANOVSKIY, O.D.; YUROV, P.P.; Prinimali uchastiye: NIFAGINA, A.A.; CHERNYY, I.I.; GERSHOYG, Yu.G.; KOSTIKOV, A.G.; DOLGIKH, M.A.; MOVSKOVICH, S.A.; STUPIN, D.D.; NEVOYSA, G.G.

Magnetization roasting of Kerch ores in the experimental factory of Kamysh-Burun Combine. Gor. zhur. no.12:30-37 D '62. (MIRA 15:11)

1. Institut Mekhanobrchermet, Krivoy Rog (for Bushuyev, Gubin, Goncharenko, Karmazin, Margulis, Mitrov, Nikolayenko, Nifagina, Chernyy, Gershoyg, Kostikov). 2. Kamyshburunskiy zhelezorudnyy kombinat, Kerch' (for Bobrushkin, Burov, Rybakov, Soshin, Tatsiyenko, Tovstanovskiy, Yurov, Dolgikh, M.A.; Movskovich, S.A.; Stupin, D.D.; Nevoysa).
(Kerch Peninsula—Ore dressing)
(Iron ores)

TOVSTENKO, N. V.

AUTHOR: Tovstenko, L.V., Engineer 128-58-6-9/17

TITLE: Die Casting with Bottom Finish-Pressing (Lit'ye v kokil' s nizhney doprossovkoy)

PERIODICAL: Liteynoye Proizvodstvo, 1958, Nr 6, p 27 (USSR)

ABSTRACT: Press-molds for the production of toys and other objects of rubber or organic materials are usually made of copper alloys. The bottom part of such molds is cut on machine tools and subsequently finished and engraved. The experimental plant "Ukrgromkonstruktor" has developed a technology for making press-molds of silumin and other aluminum alloys, needing little mechanical finishing. The method consists of die casting in a simple way which is described and illustrated by a drawing (Figure 1). The method reduced production costs by 5 times, and increased the output of press-molds by 7 to 8 times. There are 2 figures.

AVAILABLE: Library of Congress
Card 1/1 1. Metals-Casting 2. Die casting-Equipment 3. Aluminum alloys-Applications 4. Rubber-Molding 5. Plastics-Molding

TOVSTENKO, V.

Let's revive the export of "archa" (juniperus turkestanica).
Vnesh.torg 30 no.5:39-40 '60. (MIRA 13:5)
(Juniper)

1. TOVSTIK, M. E.

2. USSR (600)

4. Planets, Minor

7. Amended constants of planet 1004 Belopolskiya. Biul. Inst. teor. astron. 5 No. 4, 1952.

9. Monthly List of Russian Accessions, Library of Congress, May 1953. Unclassified.

[illegible] Grains. Leguminous Grains. Tropical Cereals.

ABS. JOUR. : REF ZHUR - BIOLOGIYA, NO. 4, 1959, No. 15583

AUTHOR : Tovstik, M.G.

INST. : Kirgiz Sci. Res. Inst. of Agric.

TITLE : Sowing Dates of Winter Wheat on Fallow of Southern Kirgizia.

ORIG. PUB. : Byul. Kirg. n.-i. in-ta zemled., 1957, 1, 16-21

ABSTRACT : The optimal dates of 10 to 20 October and terminal dates from 30 Sept. to 30 Oct. for sowing in the south of Kirgizia were found in consequence of plot experiments in 1948-1953 with sowings in pure fallow lands, that studied the sowing dates every 10 days.

CARD: 1/1

L 04935-67 EWP(m)/EWP(k)/EWT(d)/EWT(l)/EWT(m)/EWP(w) IJP(c) EM/WW
ACC NR: AP6028360 SOURCE CODE: UR/0043/66/000/003/0077/0082

AUTHOR: Sabaneyev, V. S.; Tovstik, P. Ye.

56
B

ORG: none

TITLE: Oscillations of a circular cylinder near the free surface of a heavy liquid

SOURCE: Leningrad. Universitet. Vestnik. Seriya matematiki, mekhaniki i astronomii, no. 3, 1966, 77-82

TOPIC TAGS: incompressible fluid, fluid dynamics, forced vibration, mechanical vibration, cylindric shell structure

ABSTRACT: The two-dimensional problem of small stationary oscillations of a circular cylinder with its axis parallel to the horizontal surface of an ideal incompressible heavy fluid is investigated. Waves are formed on the free surface of the liquid. Because small oscillations of the cylinder are studied, the surface waves are also small. The Kochin integral equation (N. Ye. Kochin. Sobr. soch., t. II. M., GITTL, 1949) is solved by expansion into a power series in a small parameter. The theoretically derived expressions for the virtual

Card 1/2 UDC: 534.014.4

L 01935-67
ACC NR: AP6028360

masses and the wave resistance are found to be functions of the relative depth and Froude number. The results are summarized in graphs and tables. Orig. art. has: 28 formulas, 2 tables, and 2 figures.

SUB CODE: 20/13/ SUBM DATE: 26May65/ ORIG REF: 004/ OTH REF: 001

kh

Card 2/2

SABANEYEV, V.S.; TOVSTIK, P.Ye.

Effect of longitudinal motion on the transverse vibrations of a solid of revolution in an infinite fluid. Vest. LGU 20 no.19:120-125 '65. (MIRA 18:10)

TOVSTIK, P.Ye.

Transverse vibrations of cylindrical springs considering longitudinal compression. Issl.po uprug.i plast. no.1:219-228 '61. (MIRA 15:2)
(Springs(Mechanism)—Vibration))

TOVSTIK, P.Ye.

Transverse vibrations of noncylindrical springs compressed. Issl.po uprug.i plast. no.1:229-235 '61. (MIRA 15:2)
(Springs(Mechanism)--Vibration))

TOVSTIK, P.Ye.

Normal degeneration of boundary value problems. Vest. LGU. 18 no.19:124-134 '63. (MIRA 16:11)

TOVSTIK, P.Ye.

Asymptotic integration method for equations governing the vibrations of springs. Vest.LGU 17 no.7:119-134 '62. (MIRA 15:5)
(Differential equations, Partial)
(Springs (Mechanism)--Vibration)

TOVSTIK, P.Ye.

Vibrations of a plane spiral spring. Issl. po uprug. i plast. no.2:105-120 '63. (MIRA 16:8)
(Elastic rods and wires--Vibration)

BUKHARINOV, G.N., dots.; L'VOVICH, A.Yu.; SABANEYEV, V.S.; TIKHONOV, A.A.; TOVSTIK, P.Ye.; TSAR'KOVA, Z.I., red.

[Laboratory manual on the theory of oscillations] Laboratornyi praktikum po teorii kolebanii. Leningrad, Izd-vo Leningr. univ., 1965. 75 p. (MIRA 18:4)

1. Leningrad. Universitet. Matematiko-mekhanicheskiy fakul'tet.

SABANEYEV, V.S.; TOVSTIK, P.Ye.

Vibrations of a solid of revolution in a fluid bounded by a wall or a free surface. Vest. LGU 20 no.1:84-94 '65.
(MIRA 18:2)

TOVSTIUC, C.

"New type of bit for a deep borer." (p.95). UHLI (Ministerstvo paliv a evergitiky) Praha, Vol 4, No 3, Mar. 1954.

SO: East European Accessions List, Vol 3, No 8, Aug 1954.

TOTSTIUC, C.

Increasing the core output in coal test drilling by applying column boring tubes with an enlarged diameter. Revista Minelor, #1:17:Jan 59

CA

1

Testing the centrifugal pump [illegible] constructed by the Kalinin plant in Moscow. P. P. Tovstolas and I. Ya. Kel. *Khim. Mashinostroenie* 1960, No. 3, 10-14; *Khim. Ref. Zhur.* 1960, No. 8, 135.—The tests indicate that the pump can be used for pumping paper pulp of a 3.0-3.5% concn. Diagrams of the pump are given and the testing method is described. W. R. Henn

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001756420010-5"

TOVSTIK, M.G., Cand Agr Sci -- (diss) "Dates for sowing and norms for seeding winter wheat in the middle land of the south of the Kirghiz." Frunze, 1958, 15 pp. (Kirghiz Agr Inst) 130 copies (KL, 39-58, 111)

TOVSTIK, P.Ye. (Leningrad)

Natural vibrations of a thin spherical dome. Izv. AN SSSR. Mekh. no.6:111-113 N-D '65. (MIRA 18:12)

37217

24420?

S/043/62/007/002/006/007
D407/D301

AUTHOR: Tovstik, P.Ye.

TITLE: Asymptotic method of integrating equations of spring vibrations

PERIODICAL: Leningrad. Universitet. Vestnik. Seriya matematiki, mekhaniki i astronomii, no. 7, 2, 1962, 119 - 134

TEXT: Small longitudinal-, transverse-, and torsional vibrations of a cylindrical spring are analyzed; the spring is treated as a thin curvilinear rod of circular cross-section, subjected to an axial load and with rigidly clamped ends. A system of differential equations is set up, describing the small forced vibrations of the spring. After transformations, one obtains

$$\begin{aligned} A_{11}\gamma(s) + A_{12}v(s) + A_{13}w(s) &= 0, \\ A_{12}\gamma(s) + A_{22}v(s) + A_{23}w(s) &= -\sigma S\omega^2 v(s), \end{aligned} \qquad (1.11)$$

$$\begin{aligned} A_{13}\gamma(s) + A_{23}v(s) + A_{33}w(s) &= -\sigma S\omega^2\left[w(s) - \frac{1}{q_0^2}\frac{d^2w}{ds^2}\right], \\ T''(t) + \omega^2 T(t) &= 0, \end{aligned} \qquad (1.12)$$

Card 1/4

Asymptotic method of integrating ...

where $\gamma(s, t) = \gamma(s)T(t)$, $v(s, t) = v(s)T(t)$, $w(s, t) = w(s)T(t)$; (1.13)

A_{ij} are linear differential operators; v and w are projections of the displacements; γ is a small angle of rotation of Fresnel's $_2$tri-hedron. The problem reduces to determining the eigenvalues ω_k and eigenfunctions γ_k, v_k and w_k of system (1.11). This is solved by an asymptotic method of integration. It is assumed that the vertical angle δ of the coils is small and the number of coils n is large. The small parameter

$$\mu = \operatorname{tg} \delta \tag{2.1}$$

is introduced. After transformations, (1.11) become:

$$\begin{aligned} A_{11}\gamma_1 + A_{12}v + A_{13}w &= 0, \\ A_{12}\gamma_1 + A_{22}v + A_{23}w &= -\mu^2\lambda^2 v, \\ A_{13}\gamma_1 + A_{23}v + A_{33}w &= -\mu^2\lambda^2(1-p^2)w, \end{aligned} \tag{2.7}$$

where

$$\lambda^2 = \frac{\sigma S \omega^2}{\mu^2 q_0^4}, \quad p = \frac{d}{ds_1}, \quad \gamma_1 = \frac{\gamma}{q_0}, \tag{2.8}$$

and the operators A_{ij} are given by expressions. The unknown func-

tions are expanded in series in μ. After calculations, one obtains the general solution of system (2.7), viz:

$$\gamma(s) = \sum_{i=1}^{4} C_i \gamma_i(z) + \sum_{i=1}^{4} (\bar{C}_i \gamma_{i+4}(s) + \bar{\bar{C}}_i \gamma_{i+8}(s)), \qquad (2.23)$$

with analogous expressions for v(s) and w(s). To determine the constants C_i, $\bar{C}_i$ and $\bar{\bar{C}}_i$, (i = 1, 2, 3, 4), one obtains a system of 12 linear homogeneous equations. For the existence of a nonvanishing solution it is necessary that the determinant Δ of this system be zero. With $\mu = 0$, the determinant decomposes into the product

$$\Delta = \Delta_1 \Delta_2 \Delta_3^2 \Delta_4^2 \qquad (3.1)$$

where Δ_i are expressions involving trigonometric functions of v and w. The equations $\Delta_1 = 0$ and $\Delta_2 = 0$ yield the frequencies of longitudinal and torsional vibrations of a rod, equivalent to the spring. Thus, in the zeroth approximation one obtains the same fre-

quencies of eigenvibrations as those of an equivalent rod; the frequencies of the transverse vibrations, however, were found to be multiples. Further, the first- and higher approximations are constructed for the case of longitudinal vibrations and for transverse vibrations with even number of half-waves. Torsional vibrations are treated analogously to longitudinal vibrations. If the longitudinal- and torsional vibrations of an equivalent rod are considered, then an error of the order of μ arises in determining the eigenfunctions and of the order of μ^2 in determining the eigenfrequencies. The approximate solutions are constructed by iteration processes, by a method set forth in the references. The transverse vibrations with odd number of half-waves are considered in an analogous manner. In the case of a thin curvilinear rod, it was found that the eigenvibrations take place in 2 mutually-perpendicular directions only, their frequencies being different. There are 1 figure and 4 Soviet-bloc references.

SUBMITTED: November 27, 1961

TOVSTIK, P.Ye.

Forced vibrations of cylindrical springs. Issl. po uprug. i plast. no.3:96-106 '64. (MIRA 17:6)

TOVSTIK, P.Ye.

Problem of the vibration of a beam in a fluid. Vest. LGU 19 no.19: 146-152 '64. (MIRA 17:11)

L 14580-66 EWT(d)/EWT(m)/EWP(w)/EWP(v)/EWP(k)/EWA(h)/ETC(m)-6 IJP(c) WW/EM

ACC NR: AP6002326 SOURCE CODE: UR/0373/65/000/006/0111/0113

AUTHOR: Tovstik, P. Ye. (Leningrad)

ORG: none

TITLE: Free vibrations of a thin spherical dome

SOURCE: AN SSSR. Izvestiya. Mekhanika, no. 6, 1965, 111-113

TOPIC TAGS: shell, spherical shell, shell vibration, shell theory

ABSTRACT: The possible application of asymptotic methods to the solution of the problem of free vibrations of a thin spherical shell is investigated. Axially symmetric vibrations and the general case are studied, with the number of waves along a parallel assumed to be small. After separation of variables, the given problem may be written as the system

$$\Delta U + (2+\lambda)\,U + (2+\sigma)\,\lambda w = 0$$

$$\Delta^2 w + 2\Delta w + c^2(1-\sigma^2-\lambda)\,w - c^2(1+\sigma)\,U = 0$$

$$\Delta V + 2\left(1+\frac{\lambda}{1-\sigma}\right)V = 0$$

$$U = \frac{1}{\sin\theta}\left(\frac{\partial(u\sin\theta)}{\partial\theta} + \frac{\partial v}{\partial\varphi}\right) - (1+\sigma)\,w, \quad V = \frac{1}{\sin\theta}\left(\frac{\partial(v\sin\theta)}{\partial\theta} - \frac{\partial u}{\partial\varphi}\right)$$

$$\Delta = \frac{\partial^2}{\partial\theta^2} + \operatorname{ctg}\theta\frac{\partial}{\partial\theta} + \frac{1}{\sin^2\theta}\frac{\partial^2}{\partial\varphi^2}, \quad \lambda = \frac{(1-\sigma^2)R^2\rho\omega^2}{E}, \quad c^2 = \frac{12R^2}{h^2}$$

Card 1/3

where ϕ and Θ are geographic coordinates; u, v, and w are translation projections on the meridian, parallel, and inner normal directions; ω is the frequency of natural vibration; ρ, E, and σ are the density, Young's modulus, and Poisson's coefficient; R and h are the radius and thickness of the shell. Trigonometric wave functions along a parallel are given by

$$u(\varphi, 0) = u(0)\cos m\varphi, \quad v(\varphi, 0) = v(0)\sin m\varphi, \quad w(\varphi, 0) = w(0)\cos m\varphi,$$

where m = 0, 1, 2, 3, ... A general expression for u, v, and w is

$$u = -\sum_{j=1}^{3} A_j C_j y_{jm}' + \frac{m}{p_4 \sin\theta} C_4 y_{4m} \qquad (y_{jm}(0) = P_{\nu_j}^{m}(\cos\theta))$$

$$v = \sum_{j=1}^{3} \frac{mA_j}{\sin\theta} C_j y_{jm} - \frac{C_4}{p_4} y_{4m}', \quad w = \sum_{j=1}^{3} C_j y_{jm}$$

$$A_j = \frac{1}{p_j}\left[1 + \sigma + \frac{(2+\sigma)\lambda}{p_j - 2 - \lambda_j}\right] \quad (j = 1, 2, 3), \quad p_4 = 2\left(1 + \frac{\lambda}{1-\sigma}\right),$$

where C_1, ..., C_4 are constants and p_1, p_2, p_3 are roots of the equation

$$p^3 - (4+\lambda)p^2 + [c^2(1-\sigma^2-\lambda) + 2(2+\lambda)]p - \\ - c^2[(2+\lambda)(1-\sigma^2-\lambda) + (1+\sigma)(2+\sigma)\lambda] = 0.$$

For selected problem and boundary conditions, the roots of this equation are found

Card 2/3

L 14580-66
ACC NR: AP6002326

and are used in combination with the spherical function to yield an asymptotic formula having Gamma function members. One example is given for axial-symmetric vibration, and the roots of the vibration equation are found and tabulated for the first six values of λ. Orig. art. has: 25 equations and 1 table.

SUB CODE: 13,20/SUBM DATE: 12Apr63/ ORIG REF: 005

FW

Card 3/3

ACCESSION NR: AP4018861 S/0043/64/000/001/0042/0057

AUTHOR: Ibragimov, I. A. ; Tovstik, T. M.

TITLE: Evaluation of the spectral functions of one class of stationary random sequences

SOURCE: Leningrad. Universitet. Vestnik. Seriya matematiki, mekhaniki i astronomii, no. 1, 1964, 42-57

TOPIC TAGS: random sequence, stationary random sequence, statistics, spectral analysis, spectral function, stochastic process

ABSTRACT: The paper considers the real, stationary, random sequence $\{x_j\}$:

$$x_j = \sum_{k=-\infty}^{\infty} a_{k-j} \xi_k, \qquad (1)$$

where the ξ_k are independent, equally distributed random variables with zero mean and finite variance. The correlation function of the sequence is denoted by R_m, the corresponding spectral function by $F(\lambda)$ and the spectral density by $f(\lambda)$. The asymptotic behavior of the evaluation:

$$F_N^*(\lambda) = \frac{1}{2\pi N} \int_0^{\lambda} \left| \sum_{j=1}^{N} x_j e^{-ij\lambda} \right|^2 d\lambda \qquad (2)$$

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ACCESSION NR: AP4018861

is studied for an unknown spectral function $F(\lambda)$, constructed from a sample of size N $(x_1, \ldots, x_N)$ taken from $\{x_j\}$. The measures P_N in $C[0, \pi]$ are generated by the random process $\xi_N(\lambda) = \sqrt{\pi}[F_N^*(\lambda) - F(\lambda)]$. The main theorem states that as $N \to \infty$ the sequence of measures P_N weakly converges to the measure P in $C[0, \pi]$ generated by the zero-mean, gaussian, random process $\xi(\lambda)$, under certain assumptions concerning x_j and $f(\lambda)$. In particular:

$$\lim_{N\to\infty} P\left\{\max_{0<\lambda<\pi} \sqrt{N}|F_N^*(\lambda) - F(\lambda)| < z\right\} = P\left\{\max_{0<\lambda<\pi} |\zeta(\lambda)| < z\right\}. \quad (3)$$

This theorem is a further extension of the results obtained earlier by U. Grenander and M. Rosenblatt (Ann. Math. Statistics, 24, 537-558, 1953) and by one of the present authors (Ibragimov). The rest of the paper is devoted to additional proofs of this theorem, the study of the correlation function and the asymptotic normality of the finite distributions of the process $\xi_N(\lambda)$, and an evaluation of the moments $E|\xi_N(\lambda_2) - \xi_N(\lambda_1)|^{\beta/2}$. Orig. art. has: numerous equations.

Card 2/2

TOVSTOLES, K. F. "Subcutaneous Healing of Kidney Ruptures During Radiation Sickness." Dystrophic and necrotic processes are more pronounced in subcutaneously injured kidneys during radiation sickness. The healing process is somewhat slower.

TOVSTOLES, K.F.

Characteristics of healing of subcutaneously injured kidneys in radiation sickness. (Experimental studies). Urologiia no.5:3-6 '61. (MIRA 14:11)

1. Iz kafedry urologii (nach. - prof. G.S. Grebenshchikov) Voyenno-meditsinskoy ordena Lenina akademii imeni S.M. Kirova.
(RADIATION SICKNESS) (KIDNEYS--WOUNDS AND INJURIES)

TOVSTOLES, K.F.

Kidney function in subcutaneous traumas combined with radiation sickness. Eksper. khir. i anest. 8 no.3:70-71 My-Je'63
(MIRA 17:1)

TIKTINSKIY, O.L.; TOVSTOLES, K.F.

Pathological changes in the kidneys following the action of ionizing radiations. Urologiia 26 no.1:70-73 '61. (MIRA 14:3)
(KIDNEYS—DISEASES) (RADIATION SICKNESS)

GLUKHAREV, A.G.; TOVSTOLES, K.F.

Method for intravenous urography in rabbits. Biul.eksp. biol. i med. 51 no.1:116-118 Ja '61. (MIRA 14:5)

1. Iz kafedroy urologii (nachal'nik - doktor med. nauk G.S.Grebenshchikov) Voyenno-meditsinskoy ordena Lenina akademii imeni S.M.Kirova, Leningrad. Predstavlena deystvitel'nym chlenom AMN SSSR V.V.Parinym.
(KIDNEYS--RADIOGRAPHY)

GLUKHAREV, A.G.; TOVSTOLES, K.F.

Methods for obtaining urine from rabbits. Lab. delo [7] no.4: 57-58 Ap '61. (MIRA 14:3)

1. Kafedra urologii (nach. - doktor meditsinskikh nauk G.S. Grebenshchikov) Voyenno-meditsinskoy ordena Lenina akademii imeni S.M.Kirova.

(CATHETER) (URINE)

CHERNTSOV, I.A., kandidat biologicheskikh nauk; TOVSTOLES, M.D., redaktor; SHENDAREVA, L.V., tekhnicheskiy redaktor.

[Increasing the buoyancy of birch lumber] Povyshenie splavosposobnosti berezovogo syr'ia. Moskva, Goslesbumizdat, 1949. 9 p. [Microfilm] (MLRA 7:10)

(Birch)

TOVSTOLES, Mikhail Dmitriyevich, BERSHADSKIY, A.L. red.; FEDOROV, B.M., red.izd-va.; SHITS, V.P., tekhn.red.

[Cutting wood on slicing machine] Rezanie drevesiny na doshchechkoreznykh stankakh. Moskva, Goslesbumizdat, 1958. 118 p. (MIRA 11:9)
(Woodworking machinery)

TOVSTOLES, K.D., otv. red.

[Collection of scientific and technical papers] Sbornik nauchno-tekhnicheskikh trudov. Moskva, 1963. 126 p. (MIRA 17:9)

1. Kaluga. TSentral'nyy nauchno-issledovatel'skiy institut tary i upakovki.

VIDUYEV, N.G.; RAKITOV, D.I.; TOVSTOLES, N.I., redaktor; MINEVICH, I., tekhredaktor

[Hydrographic levelling of rivers, canals and reservoirs] Nivelirovanie rek, kanalov i vodokhranilishch. Kiev, Gos. izd-vo tekhn. lit-ry, USSR, 1952. 205 p. [Microfilm] (MLRA 7:10)
(Hydrographic surveying) (Levelling)

TOVSTOLUZH

POLOSIN-NIKITIN, Serafim Mikhaylovich; TOVSTOLUZHSKIY, M.I., redaktor
GALAKTIONOVA, Ye.N., tekhnicheskiy redaktor

[Quarrying and processing stone; machinery and the mechanization of work] Dobycha i pererabotka kamnia; mashiny i mekhanizatsiia rabot. Moskva, Mashno-tekhn. izd-vo avtotransp. lit-ry, 1959. (MLRA 9:7)
98 p.
(Stone industry)

NEKRASOV, Vladimir Konstantinovich; RITOV, Maks Nikolayevich; ROYER, Yevgeniy Nikolayevich; TOYSTOLUZHSKIY, Nikolay Iosifovich; ZAMAKHAYEV, M.S., red.; IVANOV, S.S., red.izd-va; MAL'KOVA, N.V., tekhn.red.

[Handbook for the road construction technician] Spravochnik tekhnika-dorozhnika. Izd.3., perer.i dop. Moskva, Nauchno-tekhn.izd-vo M-va avtomobil'nogo transp.i shosseinykh dorog RSFSR, 1960. 767 p. (MIRA 14:5)

(Road construction)

PIGULEVSKIY, Sergey Viktorovich; POPOVKIN, Aleksandr Petrovich; TOVSTOLUZHSKIY, N.I., inzh., retsenzent; GONCHAROV, A.F., inzh., retsenzent; KIMMEL', L.S., red.izd-va; GRECHISHCHEVA, V.I., tekhn. red.

[Construction and maintenance of 750 mm-gauge logging railroads] Ustroistvo i soderzhanie lesovoznykh zheleznykh dorog kolei 750 mm. Moskva, Goslesbumizdat, 1963. 224 p. (MIRA 17:3)

KROTOV, Vladimir Romanovich; TORGONSKIY, Mikhail Nikolayevich; GASTEV, B.G., doktor tekhn.nauk, prof., retsenzent; GAVRILOV, I.I., inzh., retsenzent; TOVSTOLUZHSKIY, N.I., red.; PITERMAN, Ye.L., red. izd-va; GRECHISHCHEVA, V.I., tekhn. red.

[Organization of the construction of logging roads] Organizatsiia stroitel'stva lesovoznykh dorog. Moskva, Goslesbumizdat, 1962. 262 p. (MIRA 16:6)

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(Forest roads--Design and construction)

NEKRASOV, Vladimir Konstantinovich; RITOV, Maks Nikolayevich; ROYKH, Yevgeniy Nikolayevich; TOVSTOLUZHSKIY, Nikolay Iosifovich; ZAMAKHAYEV, M.S., red.; IVANOV, S.S., red.izd-va; MAL'KOVA, N.V., tekhn.red.

[Handbook for the road technician] Spravochnik tekhnika-dorozhnika. Izd.3, perer. i dop. Moskva, Nauchno-tekhn. izd-vo M-va avtomobil'nogo transporta i shosseinykh dorog RSFSR, 1960. 767 p. (MIRA 14:4)
(Road construction)

TOVSTOLUZHSKIY, N.I.

KOVNER, Veniamin Naumovich; GONCHAROV, Anatoliy Filippovich; TOVSTOLUZHSKIY, N.I., red.; SARMATSKAYA, G.I., red.izd-va; BRATISHKO, L.V., tekhn.red.

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(Forest construction)

TOVSTOLES, Nikolay Il'ich. Prinimali uchastiye: DIKAREV, V.V., inzh.; GORBIK, M.D., inzh.; POGONIY, V.S., inzh. ALEKSANDROVSKIY, A., red.; GOKHMAN, S., tekhn.red.

[Brief manual of engineering geodesy] Kratkii spravochnik po inzhenernoi geodezii. Kiev, Gos.izd-vo lit-ry po stroit. i arkhit. USSR, 1960. 294 p. (MIRA 14:3)
(Surveying)

ATANALYAN, E.G.; KONSTANTINOV, V.I.; KOMAROV, V.I.; LAPSHIN, N.S.; SIMONOV, A.P.; TOVSTOLES, V.Ya.; EREDINA, S.M.; PONOMARENKO, V.K., prof., red.; KHRUSTALEVA, N.I., red.; GOROKHOVA, S.S., tekhn. red.

[Methodology for solving general electrical engineering problems]Metodika resheniia zadach po obshchei elektrotekhnike. [By] E.G.Atanalian i dr. Pod red. V.K.Ponomarenko. Moskva, Vysshaia shkola, 1962. 167 p. (MIRA 15:12)
(Electric engineering)

TOVSTOLES, M.D., redaktor; VORONETSKAYA, L.V., tekhnicheskiy redaktor

[Transactions of the Central Scientific Institute of Research for the Mechanical Processing of Lumber] Trudy Tsentral'nogo nauchno-issledovatel'skogo instituta mekhanicheskoy obrabotki drevesiny. (MLRA 8:10)
Moskva, Goslesbumizdat, 1950. 241 p.

1. Moscow. Tsentral'nyy Nauchno-issledovatel'skiy institut mekhanicheskoy obrabotki drevesiny. (Lumber)

OBRAZTSOV, Sergey Aleksandrovich; TOVSTOLES, M.D., redaktor; SHAKHOVA, L.I., redaktor; KARASIK, N.P., tekhnicheskikh redaktor

[Increasing production in sawmills and woodworking plants] Intensifikatsiia lesopil'no-derevoobrabatyvaiushchego proizvodstva. Moskva, Goslesbumizdat, 1955. 58 p. (MLRA 8:6)
(Sawmills) (Woodworking industries)

T[illegible], [illegible]

"[illegible] of structural [illegible] [illegible] their ap[illegible] [illegible] tion [illegible] problems of [illegible]" [illegible] Tr. Inst. str[illegible]it. [illegible] [illegible] [illegible] [illegible] [illegible], [illegible] [illegible] 154

Points out that the method of [illegible]alogies [illegible] of substantial [illegible] in various investigations and computations. Analyses [illegible] [illegible] [illegible] havior under a load [illegible] random errors in measurements of [illegible] [illegible] [illegible] for which errors [illegible] [illegible] may be corrected [illegible] method of least squares. ([illegible], [illegible], 1[illegible])

S[illegible]: [illegible] 4[illegible]2, 19 [illegible]

TOVSTOLES, N.I., dotsent, kandidat tekhnicheskikh nauk.

Necessary precision of river and canal leveling. Sbor.st.po geod. no.5:73-80 '53. (MLRA 9:7)
(Leveling)

TOVSTOLES, Nikolay Il'ich. Prinimali uchastiye: DIKAREV, V.V., ass.; GORBIK, M.D., dots.; ALEKSANDROVSKIY, A.Ya., red.; YEREMINA, I.A., tekhn. red.

[Brief textbook in engineering geodesy] Kratkii spravochnik po inzhenernoi geodezii. Izd.2., ispr. i dop. Kiev, Gosstroiizdat, USSR, 1963. 318 p. (MIRA 17:3)

TOVSTOLES, Nikolay Il'ich, professor, doktor tekhnicheskikh nauk; MAL'-CHEVSKIY, V., vedushchiy redaktor; GOLOVCHENKO, G., tekhnicheskiy redaktor

[Connecting the alignment to triangulation points] Priviazka trassy k trianguliatsionnym punktam. Kiev, Gos. izd-vo tekhn. lit-ry USSR, 1956. 121 p. (MLRA 9:11)
(Triangulation)

1. TOVSTOLES, T. A.

2. USSR (600)

4. Mites

7. Using an infusion of onion scales to control red spider. Sad i og No 12 1952.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

1. TOVSTOLES, T.A.

2. USSR (600)

4. Insecticides

7. Using an infusion of onion scales to control red spider. Sad i og. No. 12 1952.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

TOVSTOLES, V.I.

TOVSTOLES, V.I.

Electrothermometric apparatus with mirror galvanometer. Klin.med., Moskva 18 no.10:66-67 Oct 50. (CLML 20:4)

1. Of the Central Institute of Health Resort Therapy of the Ministry of Public Health USSR.

TOVSTOLES, V.V.

On the most efficient depth for aeration tanks. Vod. i san tekh. i no.2:31-32 My'55. (MLRA 8:11)

(Water--Aeration)

TOVSTOLES, V.Ya., prepodavatel', inzh.-elektrik (Moskva)

"Principles and technics of electrocardiography" by N.G. Nikulin. Reviewed by V.IA. Tovstoles. Klin.med. 36 no.8:157-158 Ag '58 (MIRA 11:9)

1. TSentral'nyy institut usovershenstvovaniya vrachey (for Tovstoles)
(ELECTROCARDIOGRAPHY)

TOVSTOLIS, Nikolay Il'ch; DOTSENKO, M., redaktor; NOVIK, O., tekhnichniy redaktor

[The shape and size of the earth] Forma i rozmiry zemli. Kyiv, Derzh. vyd-vo tekhn. lit-ry, URSR, 1956. 33 p. (MLRa 10:4)
(Earth--Figure)

TOVSTOLUZHSKIY, N.I.

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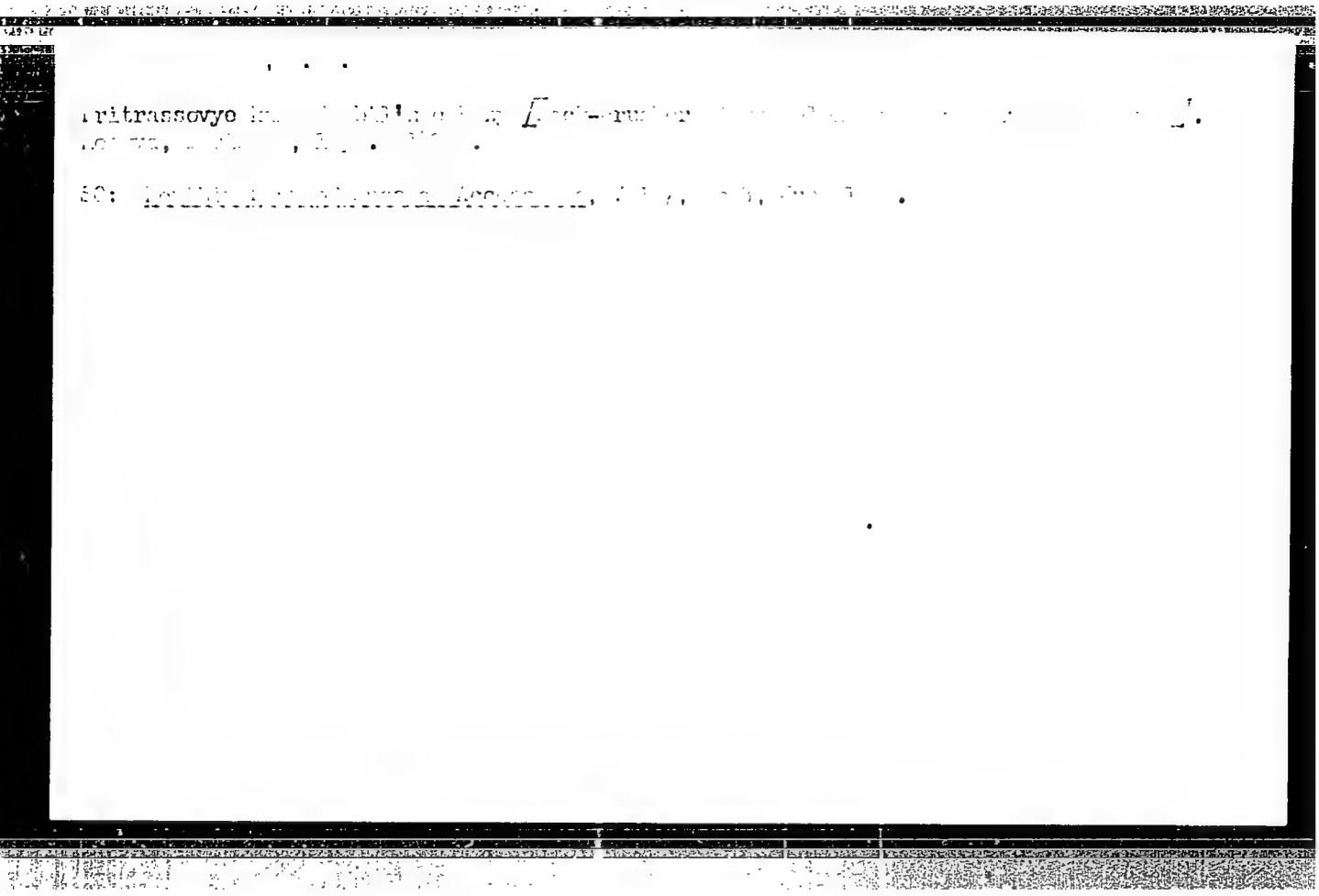
Pritrassovye Kamnedrobil'nye Bazy (Rock Crushing Plants Along Road Construction Routes) Moskva, Dorizdat, 1952.

141 p. Illus., Diagrs., Tables.



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Spravochnik Tekhnika-Dorozhnika (Reference Book for the Road Technician, by) V. K. NEKRASOV, M. N. RITOV i N. I. TOVSTOLUZHSKIY. Izd. 2., perer. i dop. Moskva, Dorizdat, 1953.
591 p. Illus., Diagrs., Maps, Tables

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1953

TOVSTOLUZHSKIY, N.I.; ARSEN'YEV, A.A., redaktor; GALAKTIONOVA, Ye.N., tekhnicheskiy redaktor

[Rock crushing plants along road construction routes] Pritrassovye kamnedrobil'nye bazy. Moskva, Izd-vo dorozhno-tekhn. litry Gozhosdora MVD SSSR, 1952. 141 p. [Microfilm] (MLRA 7:10)
(Crushing machinery)
(Road construction)

NEKRASOV, Vladimir Konstantinovich; RITOV, M.N.; TOVSTOLUZHSKIY, N.I.

[Highway engineer's reference book] Spravochnik tekhnika-dorozhnika. Izd.2., perer.i dop. Moskva, Izd-vo dorozhno-tekhn. lit-ry, 1953. 591 p.
(MLRA 6:10)
(Road construction)

S/103/60/021/05/04/013
B007/B011

AUTHOR: Tovstukha, T. I. (Moscow)

TITLE: Effect of Random Noises on the Stabilized Mode of Operation of a Step Extremum System With a Parabolic Characteristic of the Object

PERIODICAL: Avtomatika i telemekhanika, 1960, Vol. 21, No. 5, pp. 575 - 584

TEXT: The author of the present paper investigated a step extremum system with the parabolic characteristic $y=x^2$ of the object. The task is that of finding the minimum of the characteristic and to maintain it. The problem is the same as in the paper by A. A. Fel'dbaum (Ref. 1). All quantities were investigated at discrete instants $t=nT$ ($n=0, 1, 2, \ldots$). T is the time between two successive working steps or the duration of a cycle. Fig. 1 shows a scheme of the extremum system investigated. It is further shown that the searching for the minimum may be regarded as a discrete Marcov process (Ref. 2). An equivalent-circuit

V/B

diagram of such a process is set up and shown in Fig. 2 for greater convenience. Formula (10) is written down for the expectation value of the initial quantity $M_n[y]$. Formulas (16) - (19) are derived. The probabilities of certain conditions in the stabilized mode of operation are thereby given to completeness. Formula (21) is then derived for the expectation value with a stabilized mode of operation. Next, the case of uniform distribution of the probability density is examined, and it is shown that the most expedient working mode in this case is with small steps. A. A. Fel'dbaum posed the problem under discussion and assisted the author with advice. S. Ya. Rayevskiy is mentioned for having discussed the results obtained. There are 5 figures and 2 references: 1 Soviet and 1 English.

SUBMITTED: October 21, 1959

24838
S/103/61/022/008/006/015
D274/D302

16,8000 (1031, 1121, 1344)

AUTHOR: Tovstukha, T.I. (Moscow)

TITLE: On the choice of parameters of the control part of a gradient system of automatic optimization

PERIODICAL: Avtomatika i telemekhanika, v. 22, no. 8. 1961, 1027-1037

TEXT: By directly solving a system of difference equations, concrete results are obtained which permit choosing the working parameters a and a_o for any number of independent inputs; (a - the coefficient giving the working step, a_o - the trial noise); a and a_o have to be determined in accordance with the permissible sufficiently small steady-state values of the mathematical expectation m_y of the output variable y. For the expectation

$$m_y = \sum_{i=1}^{m} (m_{xi}^2 + D_{xi}) \qquad (1.6)$$

Hence it is required to determine m_x and D_x for each input variable;

Card 1/4

On the choice of parameters...

(D is the dispersion). For the case of one input, both $m_y(a, a_0)$ were calculated which makes it possible to take into account not only m_y, but also the value of the mean spread with respect to m_y. A criterion is given which characterizes optimization of the system with respect to time: A.A. Fel'dbaum (Ref. 2: Statisticheskaya teoriya gradiyentnykh sistem avtomaticheskoy optimizatsii pri kvadratichnoy kharakteristike ob''yekta. Avtomatika i telemekhanika, v. 21, no. 2, 1960). Case 1: One input. (m = 1). By solving difference equations, expressions for m_x and D_x are obtained; passing to the limit for $n \to \infty$, one obtains:

$$m_x = \frac{(1 - a\delta)}{4a\delta} \qquad (2.6)$$

$$D_x = \frac{\sigma^2}{8\delta^2} \frac{a\delta}{1 - 2a\delta} \qquad (2.7)$$

and

$$m_y = \gamma^2 \left(\frac{1 - a\delta}{4a}\right)^2 + \frac{\sigma^2}{8\delta^2} \frac{a\delta}{1 - 2a\delta} \qquad (2.8)$$

$$D_y = M\left[(y - m_y)^2\right] = M(x^4) - (M(x^2))^2.$$

Card 2/ 4

On the choice of parameters...

Here: n is the cycle number, $\delta = a_o - \frac{\gamma}{4}$, γ is a factor which gives the rate of displacement of the characteristic due to noise; σ is given by Eq. (2.7). Graphs are given where $a\gamma$ is plotted against m_y and D_y, respectively, for the case $\gamma / \sqrt{\sigma} = 0.2$. These graphs show that under certain conditions for the steady-state values of the mathematical expectation and the dispersion of the output variable of the system, the possible values of the working parameters can be determined if γ and σ are known. In accordance with the value of $m_y [n]$, the steady-state process can be either aperiodic or periodic. A criterion is set up for the speed of the steady-state process:

$$I = \lim_{n \to \infty} \sum_{k=0}^{n} (m_y [k] - m_y)^2 \qquad (2.12)$$

The system with minimum I_o is considered as optimal with respect to time. Case II: m independent inputs. The expressions for m_i and D_i are:

$$m_i = \frac{\gamma}{4aa_o} \left\{ \left[\frac{\gamma}{4\delta} \left(1 + \frac{a\delta(1-2m)}{m} \right) + 1 + \frac{3a\delta}{m} \right] - i \frac{4a\delta}{m} \right\} \qquad (3.10)$$

Card 3/4

On the choice of parameters...

$$D_i = D_x = \frac{a^2\sigma^2}{8m}\left[\frac{1}{a\delta(1-2a\delta)} + \frac{m-1}{aa_0(1-2aa_0)}\right], \qquad (3.11)$$

Hence the dispersion is the same for all inputs; m_y is found from (1.6) and the last two formulae. Graphs are given ($m_y/\sigma^2.\gamma^2$ versus $a\gamma/4$, with m = 1,2,3,10, and various a_0). These show that the value of the mathematical expectation of the output variable increases with the number of inputs (for a fixed a). The above method of calculating m_y can be readily extended to a system with m dependent inputs, provided the relation

$$y[n] = \sum_{i=1}^{m} x_i^2[n] + b\sum_{i\neq j} x_i[n]x_j[n].$$

holds. There are 6 figures and 3 references: 2 Soviet-bloc and 1 non-Soviet-bloc.

SUBMITTED: July 25, 1960

Card 4/4

S/271/63/000/001/013/047
D413/D308

AUTHOR: Tovstukha, T.I.

TITLE: Determination of the optimal parameters of step- and gradient-type extremal systems in the presence of noise fluctuations

PERIODICAL: Referativnyy zhurnal, Avtomatika, telemekhanika i vychislitel'naya tekhnika, no. 1, 1963, 41, abstract 1A226 (In collection: Avtomat. regulirovaniye i upr., M., AN SSSR, 1962, 413-425)

TEXT: The author considers the determination of the optimal parameters of step- and gradient-type systems having a parabolic characteristic $y = x^2$. The task of the system is to search automatically for the minimum of the characteristic and to hold it. It is shown that given limits to the steady-state values of the mathematical expectation and dispersion of the output quantity of a gradient-type automatic optimization system, one can determine the possible values of the working parameters of the system.
[Abstracter's note: Complete translation]

Card 1/1

POGONYAYLO, G.P., kand. veter. nauk; ANTIPIN, V., veterinarnyy [illegible]; TOVSTUKHO, K., veterinarnyy vrach; KONEVIV, I.M., veterinarnyy vrach

Immunization of young pigs against paratyphoid fever at an early age. Veterinariia 41 no.7.42-45 Jl '64. (MIRA 18:1)

1. Leningradskiy nauchno-issledovatel'skiy veterinarnyy institut (for Pogonyaylo). 2. Kemerovskaya oblastnaya veterinarnaya laboratoriya (for Antipin, Tovstukho). 3. Sebezhskoye proizvodstvennoye upravleniye, Pskovskoy oblasti (for Konevev).

S/123/61/000/005/002/017
A004/A104

18.8200 1413, 1454

AUTHOR: Tovstykh, Ye. V.

TITLE: On the problem of increasing the fatigue strength of CXJ-4 (SKhL-4) ships hull steel in the presence of stress concentrators

PERIODICAL: Referativnyy zhurnal, Mashinostroyeniye, no. 5, 1961, 15, abstract 5A130. (Tr. Leningr. korablestroit. in-ta, 1959, no. 29, 231-237)

TEXT: The effect of the following factors on the fatigue strength of SKhL-4 steel was investigated experimentally: welding a rigidity rib to the specimen (the welding seam is the stress concentrator); surface cold-working of the specimen with the aid of a pneumatic hammer and a shot-blast apparatus; mechanical working of the seam. The comparison was effected by the number of cycles endured up to destruction under constant stress. The welding on of ribs lowers the strength of SKhL-4 steel 2-3 times. Cold working, particularly by the shot-blast method increases the fatigue strength considerably. The mechanical working of the seam is less effective. Under production conditions at shipbuilding plants, the most expedient method of increasing the fatigue strength in the welding zone is the two-sided shot-blast cold working. I. Tryanin

[Abstractor's note: Complete translation]

Card 1/1

Leningrad Shipbuilding Institute, Chair metallovedeniya

VEYNGARTEN, Abram Mikhaylovich, kand. tekhn.nauk; DELLE, Vasiliy Adoliyevich, prof., doktor tekhn. nauk; NOSKIN, Aba Vladimirovich, kand. tekhn. nauk; SOKOLOV, Nikolay Nikolayevich, kand. tekhn. nauk; TOVSTYKH, Yevgeniy Vasil'yevich, kand. tekhn. nauk; SHPEYZMAN, Veniamin Matveyevich, kand. tekhn. nauk; LEBEDEV, K.P., kand. tekhn. nauk, retsenzent; ALESHIN, D.V., inzh., retsenzent; MES'KIN, V.S., doktor tekhn. nauk, nauchnyy red.; KLIORINA, T.A., red.; TSAL, R.K., tekhn. red.; KRYAKOVA, D.M., tekhn. red.

[Shipbuilding steel]Sudostroitel'naia stal'. [By] A.M. Veingarten i dr. Leningrad, Sudpromgiz, 1962. 303 p. (MIRA 15:11)

(Shipbuilding materials) (Steel, Structural)

ACCESSION NR: AP4041374 S/0048/64/028/006/1048/1050

AUTHOR: Tovstyuk, K.D.; Gavaleshko, N.P.; Rarenko, I.M.

TITLE: Galvanomagnetic and thermoelectric effects in HgTe /Report, Third Conference on Semiconductor Compounds held in Kishinev 16 to 21 Sep 1963/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v.28, no.6, 1964, 1048-1050

TOPIC TAGS: semiconductor property, galvanomagnetic effect, Hall effect, Nernst-Ettinghausen effect, mercury telluride

ABSTRACT: Electric conductivities, Hall coefficients, magnetoresistivities, and Nernst-Ettinghausen coefficients were measured at temperatures from 80 to 480°K for single crystals and polycrystalline samples of n- and p-type HgTe. Some of the results are presented graphically. The material was produced by fusing spectroscopically pure Hg and Te in evacuated quartz ampoules and subjecting the product to zone refining and prolonged anneal in mercury vapor. This procedure yielded n-type material. Specimens with p-type conductivity were obtained by doping with Ag, Au or Cu. Specimens were obtained having carrier concentrations from 10^{16} to 10^{22} cm^{-3}, and in which the Hall constant changed sign at temperatures from the very lowest to room

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ACCESSION NR: AP4041374

temperature. No measurements were performed at temperatures above 480°K because indications of decomposition were observed at this temperature. When the impurity content was not too great, the resistivity varied with temperature in the manner that is usual for semiconductors. A transition to metallic conductivity was observed with increasing impurity content. The Hall constant increased with decreasing temperature for n-type materials, and for p-type materials it decreased and changed sign. The Hall constant was measured at inductions up to 18 kGs; it varied considerably with induction and in some cases passed through a maximum. This behavior is regarded as suggesting a complex band structure and proving the presence of at least three types of carrier (electrons and two types of hole). The Nernst-Ettinghausen coefficients were positive for p-type materials, and for n-type materials they changed sign between 200 and 280°K and were positive at higher temperatures. The temperature dependence of the effective mass of the electrons was calculated from the thermal emf; the results indicate, in agreement with M.Rodot (Ann.Phys.,Ser.A, No.374,1960) and G.Popovich (Rev.Phys.8, No.3, 1963), that the conduction band is not parabolic. Orig.art.has: 1 formula and 3 figures.

Card 2/3

ACCESSION NR: AP4041374

ASSOCIATION: Chernovitskiy gos. universitet (Chernovits State University)

SUBMITTED: 00 ENCL: 00

SUB CODE: SS,IC NR REF SOV: 004 OTHER: 006

Card 3/3

ACCESSION NR: AP4040932 S/0185/64/009/006/0629/0641

AUTHOR: Tovstyuk, K. D., Tarnavs'ka, M. V. (Tarnavskaya, M. V.)

TITLE: Symmetry of energy zones of charge carriers in crystals of cubic syngony [symmetry]

SOURCE: Ukrayins'ky*y fizy*chny*y zhurnal, v. 9, no. 6, 1964, 629-641

TOPIC TAGS: Symmetry, crystallography, space group, symmetry points, cubic symmetry, cubic syngony, brillouin zone, energy band structure, band structure, crystal symmetry, group theory

ABSTRACT: Group theory is used to investigate the zone structure of crystals of cubic syngony: space groups T, O, Td and Th. The brillouin zone for groups of simple cubic syngony (T^1, T^4, O^1, O^2, O^6, O^7, T_d^1, T_d^4, T_h^1, T_h^2, T_h^6) is given in Figure 1 of Encl. 01. The brillouin zone for groups of face-centered cubic syngony (T^2, O^3, O^4, T_d^2, T_d^5, T_h^3, T_h^4) is given in Figure 2 of Encl. 01; that for groups of body-centered cubic syngony (T^3, T^5, O^5, O^8, T_d^3, T_d^6, T_h^5, T_h^7) is given in Figure 3 of Encl. 01. Extensive tables give points of zero slope of the energy bands for all these groups. Symmetry notation agrees with the symbology of O. V. Kovalev Neprivodimy*ye Predstavleniya Prostranstvenny*kh Grupp (irreducible representations

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ACCESSION NR: AP4040932

of space groups), Kiev, Izd-vo AN UkrSSR] Spin-orbit interactions and time-inversion were taken into account. The dispersion relation for the extremum sphere is found. Orig. art. has 19 numbered formulas and 12 tables.

ASSOCIATION: Chernivets'ky*y derzhuniversy*tet (Chernivetskiy State University)

SUBMITTED: 16Sep63 ENCL: 01

SUB CODE: MA NO REF SOV: 007 OTHER: 001

Card 2/3

S/0048/64/028/006/1051/1052

ACCESSION NR: AP4041375

AUTHOR: Tovstyuk, K.D.; Savitskiy, A.V.

TITLE: Magnetic susceptibility of ZnTe [Report, Third Conference on Semiconductor Compounds held in Kishinev 16 to 21 Sep 1963]

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v.28, no6.1964, 1051-1052

TOPIC TAGS: magnetic susceptibility, zinc compound

ABSTRACT: The magnetic susceptibility of ZnTe was measured at temperatures from 293 to 600°K. The material was synthesized by heating the spectroscopically pure elements in evacuated quartz ampoules. The single crystals were grown by the Bridgman technique. X-ray studies showed the crystals to have the sphalerite structure; the hexagonal modification was not found. The samples for measurement were cylinders 20 cm long and 5 or 6 mm in diameter; after being cut and polished, they were etched with aqua regia and the resulting thin film of tellurium was removed with HCl. The susceptibility measurements were performed with a modified Gouy method described by W.G.Henry and J.L.Rogers (Phil.Mag.1,223,1957). The magnetic susceptibility of the single crystals was found to be independent of temperature and equal to -1.98 x 10⁻⁶.

Card 1/2

ENCL: 00

OTHER: 005

Card 2/2

Tovstyuk, K. D.

Name: TOVSTYUK, K. D.

Dissertation: Toward a quantum theory of semiconductors of the Germanium type

Degree: Cand Phys-Math Sci

Defended at Publication: Min Higher Education UkSSR, Chernovtsy State U

~~Defense~~ Date, Place: 1956, Chernovtsy

Source: Knizhnaya Letopis', No 47, 1956

Tovstyuk, K.D.

57-8-15/36

AUTHORS Samoylovich, A.G., Tovstyuk, K.D.

TITLE The Energy Spectrum of Current Carriers in Semiconductors of the Germanium Type. (Energeticheskiy spektr nositeley toka v poluprovodnikakh tipa germaniya.)

PERIODICAL Zhurnal Tekhn. Fiz., 1957, Vol. 27, Nr 8, pp.1753-1763 (USSR)

ABSTRACT Here the authors try to combine two of the most important ideas of modern semiconductor theory: renunciation of the single-electron approach and the investigation of the problem from the point of view of the multi-electron theory within the frame of the quasi-particle method, and secondly the taking into account of the nature of chemical compound. A model is proposed which, on the occasion of the investigation of the energy spectrum, makes possible to respect the nature of the chemical compound. The authors show that the nodal lattice is essential for the electrons and the ruled lattice for the holes. The results of the investigations showed that it is just this with which the characteristic properties of electrons and holes in semiconductors of the Germanium type are connected. The energy spectrum of the current carriers in Germanium and Si is investigated. The authors show that the

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30622
S/058/61/000/008/030/044
A058/A101

24,7700 (1139, 1144, 1385)

AUTHOR: Tovstyuk, K. D.

TITLE: Hole interaction with optical vibrations in germanium and silicon

PERIODICAL: Referativnyy zhurnal, Fizika, no. 8, 19[illegible], 251, abstract 8E283 ("Nauchn. yezhegodnik za 1957 g. Chernovitsk. un-t", Chernovtsy, 1958, 474-475)

TEXT: On the basis of an earlier proposed model (FZhFiz, 1958, no. 4, abstract 8575), the temperature dependence of hole mobility in Ge and Si, which is stronger than for electrons, is qualitatively explained on the assumption that in moving along the interstices, holes interact sharply with those lattice vibrations incident to which the angle between the interstitial axes changes (the overlapping of wave functions varies sharply with these vibrations, which are optical; therefore hole interaction with them must be strong). On the other hand, the influence of angular vibrations on the electrons moving along the lattice points is insignificant, in accordance with which one observes different temperature dependences for electron mobility and hole mobility.

[Abstracter's note: Complete translation] Yu. Kulyayev

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S/058/61/000/010/079/100
A001/A101

24.7700

AUTHORS: Tovstyuk, K.D., Gvozdovskiy, I.V.

TITLE: On the problem of hole scattering in germanium

PERIODICAL: Referativnyy zhurnal. Fizika, no. 10, 1961, 262, abstract 10E270 ("Nauchn. yezhegodnik za 1957. Chernovitsk. un-t", Chernovtsy, 1958, 475 - 476)

TEXT: A relation has been found between the relaxation time for hole scattering by phonons and the quasi-momentum of the holes on the basis of the model proposed earlier (RZhFiz, 1958, no. 4, 8575). Calculations are performed using the method of approximate second quantization, taking into account interaction of only adjacent elements. Relaxation time proved to be inversely proportional to the square root from energy. It is also shown that holes interact with both longitudinal and transverse phonons, and these interactions are of the same order of magnitude.

Yu. Gulyayev

[Abstracter's note: Complete translation]

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